REMARKS

Favorable reconsideration of this application in light of the following discussion, is respectfully requested.

Claims 1-3, 5-8, 10-13 and 15-29 are pending in the application. No claim amendments are presented, thus no new matter is added.

In the outstanding Official Action, Claims 11, 12, 13, 25, 26 and 27 were rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter; Claims 15-27 and 29 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite; and Claims 1-3, 5-8, 10-13 and 15-29 were rejected under 35 U.S.C. § 102(b) as anticipated by Wang et al. ("Policy-Enabled Handoffs Across Heterogeneous Wireless Networks", published at WMCSA 1999, hereinafter "Wang").

Claims 11-13 and 25-27 were rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter for reciting a "computer storage medium" instead of a "computer-readable medium", this rejection is respectfully traversed. Independent Claims 11 and 25, each recite "a computer program product including a computer storage medium with a computer program code mechanism stored therein, which when executed by a computer causes the computer to perform a method of link management".

MPEP § 2106 discusses statutory subject matter in relation to data structures of a computer readable medium. Particularly, MPEP § 2106 provides,

> **a claimed computer-readable medium encoded with a
> data structure defines structural and functional
> interrelationships between the data structure and the
> computer software and hardware components which
> permit the data structure's functionality to be realized,
> and is thus statutory.**

Thus, based on the clear language of this section, independent Claims 11 and 25, and the claims from which they respectively depend are statutory as they define a functionality of

which is realized based on the interrelationship of the structure to the medium and recited hardware components. While the claims does not explicitly recite a "computer-readable medium", a "computer storage medium" is recited which is clearly a readable by the computer (e.g., "when executed by the computer...)", since the program stored therein is executed by a computer.

Accordingly, Applicants respectfully submit that independent Claims 11 and 25 (and the claims that depend therefrom) recite statutory subject matter, as the preambles thereof satisfy MPEP § 2106, as noted above. Therefore, Applicants respectfully submit that the rejection of these claims under 35 U.S.C. § 101 be withdrawn.

Claims 15-27 and 29 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite because, as asserted in the Official Action, "[t]he claims are claiming constant link metrics along with variable link metrics" and "the two types of metrics are considered contradictory as presently presented". However, as clearly described in an exemplary, non-limiting embodiment at p. 11, lines 13-24 of the specification, the "link metrics are classified under constant metrics and variable metrics" and "the metrics of technology standard, cost, link type, tolerable speed, QoS support, encryption support, power consumption, and sleep mode support are constant metrics, while the metrics of enables/disabled, connectivity, throughput, packet loss rate and latency are variable metrics." Thus, the claimed terms of "constant" and "variable" link metrics are clearly defined and are not contradictory, as asserted in the Official Action.

Accordingly, Applicants respectfully request that the rejection of Claims 15-27 and 29 under 35 U.S.C. § 112, second paragraph, be withdrawn.

Independent Claim 1 was rejected under 35 U.S.C. § 102(b) as anticipated by Wang. Applicants respectfully submit that independent Claim 1 states novel features clearly not taught or rendered obvious by the applied reference.

Amended Claim 1 is directed to a link manager including a detecting means for detecting an installed link. A managing means is also provided which defines a plurality of link metrics indicating characteristics of each link detected and manages data corresponding to the respective link metrics on a table. A link metric rank assigning means assigns ranks to the respective link metrics, based on a predetermined preference, and a data rank assigning means assigns ranks to the data corresponding to said respective link metrics. A selecting means is also provided which selects a link having link metrics complying with a given condition by analyzing *each link based on each individual stored metric in order of rank, and selecting a link corresponding to a record having data with a highest rank thus assigned, at a link metric with a highest rank.*

In a non-limiting, exemplary embodiment, a link manager sorts the records in the link management table shown in Fig. 6, using the link metric with the highest priority as depicted in Fig. 4, as a key. The link metric with the highest priority, is set as n=1 (step ST1) and all the records are selected (step ST2). The record selected at step ST2 is sorted based on these priorities assigned to the data (step ST3), and each individual link is examined with respect to this data assigned to the highest priority link metric. If one link is determined to have superior performance over the other links with respect to the link parameter having the highest priority, this link is selected as the active link. Otherwise, analysis continues using the next highest priority metric applied to each individual link until differentiation occurs and any one link is determined to be superior to another in terms of a selected metric in the order or priority.[1]

Specifically, amended Claim 1 recites, *inter alia*, a link manager, comprising:

> "...selecting means for selecting a link by *analyzing each link based on each individual stored metric in order of rank, and selecting a link corresponding to a record having*

---

[1] Specification at page 16, line 19 – page 18, line 10 and Fig. 7.

> *data with a highest rank thus assigned, at a link metric with a*
> *highest rank."*

Turning to the applied reference, Wang describes a system to enable handoffs between a plurality of links provided to a mobile station. Wang describes that users may specify the importance or weights of each normalized parameter corresponding to characteristics of a specific link.[2] These weights are then used simultaneously to determine a "cost function" or similar cumulative parameter corresponding to a specified network in order to determine the best available link.[3] Therefore, Wang describes that all of the parameters are normalized and weighted and then a calculation is performed in order to determine a network which is best suited for a specific mobile handoff based on the weighted preferences input by a user.[4]

However, Wang fails to teach or suggest selecting a link by *analyzing each link based on each individual stored metric in order of rank and selecting a link corresponding to a record having data with a highest rank thus assigned, at a link metric with a highest rank*, as recited in amended Claim 1.

In addressing the above-noted claimed feature, the Official Action, in the "Response to Arguments" section, states

> The portion of Wang prior art cited teaches how importance or
> weight can be set as a parameter (p. 55, column 2, lines 17-28).
> The user of the system can set the importance/weight. Wang goes
> on to teach that the importance or weight is applied when
> comparing networks to determine a winner (selection based on
> rank) (p. 56, column 1, lines 28-37). The Examiner therefore
> remains unconvinced that the claimed trait of 'analyzing each link
> based on each individual stored metric in order of rank' lacks
> novelty when compared against the traits of the Wang design.[5]

---

[2] Wang at page 55, col. 2, lines 29-35.
[3] Id. at page 56, col. 1, lines 1-37.
[4] Id.
[5] Outstanding Official Action, p. 12.

As described in the cited portion of Wang, users may specify the importance or weight of each parameter, which sum to 1, and weights of 0 may be assigned to those parameters that are of no concern to the user. Then, as described at p. 56, col. 1, lines 28-37 a "cost value", is determined for each link, which is a cumulative parameter calculated based on taking into account all of the user's assigned preferences, as noted above. The cost value for each link is then analyzed and the link with the lowest cost value wins, and is selected as the active link. Thus, Wang describes that each link is analyzed based on a cumulative parameter (cost value) which is calculated by taking into account a variety of weighted parameters corresponding to each link.

Wang, however, fails to teach or suggest *analyzing each link based on each individual stored metric in order of rank and selecting a link corresponding to a record having data with a highest 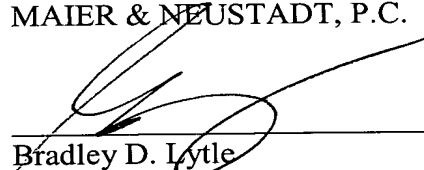rank thus assigned, at a link metric with a highest rank*. Instead, Wang clearly describes that each rank is weighed by the user, then all the ranks are calculated into a cumulative parameter, which is then used to select the link best suited to a users preference. However, the weighted parameters are not *each* analyzed in order of rank, resulting in the selection of a link *having data with a highest rank thus assigned, at a link metric with a highest rank*. As discussed above, in an exemplary non-limiting embodiment if one link is determined to have superior performance over the other links with respect to *the* link parameter having the highest priority, this link is selected as the active link and no other link parameters are analyzed. Wang fails to teach or suggest such an individualized ranking and analysis feature, as recited in independent Claim 1, and as discussed above.

Accordingly, Applicants respectfully request the rejection of Claim 1 under 35 U.S.C. § 102(b) be withdrawn. For substantially the same reasons given with respect to amended Claim 1, Applicants respectfully submit that amended Claims 6, 11, 15, 20, 25 and 29 also patentably define over Wang.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1-3, 6-8, 10-13, and 15-28 is patentably distinguishing over the applied references. The present application is believed to be in condition for formal allowance and an early and favorable reconsideration of the application is therefore requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Bradley D. Lytle
Attorney of Record
Registration No. 40,073

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)
MM/BDL/ATH:aif

I:\ATTY\ATH\PROSECUTION\22's\220118-US\220118 AM 2.9.06.DOC

Andrew T. Harry
Registration No. 56,959